

TABLE 35. PROPOSED FUNDING AND PERCENT OF REAL GROWTH FOR READINESS ITEMS, BY SERVICE (By fiscal year, in billions of dollars, and in percents)

	1982	1983	Percent of Real Growth
Spare Parts and Support Equipment			
Army	0.7	1.0	39.3
Navy/Marine Corps	3.2	3.8	12.1
Air Force	6.1	5.7	-15.0
Subtotal	10.0	10.6	-2.8
Munitions			
Army	2.3	2.6	0.3
Navy/Marine Corps	1.1	1.4	14.9
Air Force	1.1	0.9	-24.8
Subtotal	4.5	4.9	-1.8
Total	14.5	15.5	-2.5

SOURCE: Compiled by CBO from data supplied by the Department of Defense.

RISKS OF UNDERPRICING

Despite the fact that the Administration has requested significant increases in national defense funding, there is some risk that it may have underestimated the future costs of its program. The possibilities of higher inflation and higher real cost growth are the two main components of this risk. These two elements are discussed in this section. A third risk is that there may be significant additional expenditures needed to carry out the Administration's program. This factor is not discussed here because it is not quantifiable. The earlier MX discussion provided an example, however, in noting that the basing costs of the MX are probably not fully reflected in the Administration's program.

Potential Underestimation of Inflation

Under CBO's baseline economic assumptions, inflation rates would not subside as much as assumed for the February budget estimates. Higher than

anticipated inflation could cause a scaling back of defense purchases to stay within available funds. Alternatively, additional funds would be needed to complete the Administration's plans for weapons procurement and other purchases. Using CBO's inflation assumptions for defense purchases requires increases of about \$1.5 billion in budget authority in 1983 and a total of \$61 billion more by 1987. About 65 percent of this increase would be allocated to investment programs; the remainder would affect operations. The difference between the Administration and CBO inflation assumptions for defense purchases varies from roughly 1.1 percent to 1.9 percent over the projection period (see Table 36). The annual distribution of the \$61 billion figure is shown in Table 39 at the end of the chapter.

TABLE 36. COMPARISON OF CBO AND ADMINISTRATION INFLATION ASSUMPTIONS FOR DEFENSE PURCHASES (By fiscal year, budget authority deflators in percents)

	1983	1984	1985	1986	1987
CBO Assumptions	7.2	7.7	7.3	6.9	6.9
Administration's Assumptions	6.1	5.8	5.5	5.4	5.2

SOURCES: Congressional Budget Office and Department of Defense.

Real Cost Growth in Weapon Systems

Defense purchases have experienced significant real cost growth in recent years. This has occurred for a variety of reasons, including program changes (such as new specifications or revised production schedules) and underestimates of real resources (such as manufacturing hours and material costs). Although sufficient data are not available to estimate the full extent of this risk, it is possible to illustrate the effects on proposed major defense procurement funding. Recent DoD data indicate that real cost growth since 1975 in major weapons systems alone has averaged 3.5 percent per year (see Table 37). If the Administration's attempts to curb this cost growth fail and current trends continue, the Administration's estimates for major weapons systems procurement from 1983 to 1987 would have to be increased by a total of about \$48 billion. Together, a \$61 billion increase in budget authority under CBO inflation assumptions and this \$48 billion

increase in budget authority for potential real cost growth in major weapons procurement would increase national defense 1983-1987 budget authority by \$109 billion and outlays by \$62 billion.

TABLE 37. MAJOR WEAPONS SYSTEMS COST GROWTH PER UNIT (In percents)

Annual Growth Rate			Annual Growth Rate		
Dates of Reports			Dates of Reports		
March	1975	3.7	March	1979	3.4
March	1976	3.0	December	1979	3.6
December	1977	3.3	September	1980	3.7
December	1978	3.6	December	1980	3.9

SOURCES: Milton A. Margolis, "Improving Cost Estimating in the Department of Defense," Concepts, vol. 4, no. 2 (Spring 1981), p. 8 (data are derived from DoD Selected Acquisition Reports); and Stephen Gross, "Program Cost Growth in the Department of Defense as of December 31, 1980," (paper prepared by the Air Force Data Services Center, undated).

NOTE: These rates are adjusted to exclude the impact of quantity changes and inflation.

Recognizing the cost growth problem in major weapons systems, the Administration has undertaken a number of initiatives to restrain it. So far, these actions seem to have had little effect. The evidence presented below shows that real cost growth persisted at substantial levels during the first year of this Administration.

Table 38 provides cost growth data on 48 weapons systems by comparing costs as initially projected by the Administration in March 1981 against estimates contained in the 1983 budget. The table shows the approximate amount of real cost growth in major systems and notes that the defense program has absorbed a net amount of about \$2.7 billion of cost growth since last year.

TABLE 38. MAJOR WEAPONS SYSTEMS COST GROWTH IN THE 1983 PROGRAM (In millions of dollars and in percents)

Weapons System	Procurement Unit Cost March 1981	Procurement Unit Cost February 1982	Percent Increase	Cost Impact on 1983 Budget
HARM Missile, Air Force	0.31	0.78	152	97
Pershing II Missile	2.49	5.48	120	272
Phoenix Missile	1.13	2.31	104	127
AH-64 Helicopter	9.94	17.18	73	347
TR-1 Aircraft	25.18	38.85	54	55
Sparrow Missile, Navy	0.14	0.20	42	40
AV-8B Aircraft	28.34	39.67	40	204
HARM Missile, Navy	0.61	0.85	39	50
E-2C Aircraft	40.33	56.13	39	95
Patriot Missile	1.58	2.14	35	211
A-6E Aircraft	24.15	31.88	32	62
Standard Missile (RIM 66C)	0.62	0.82	32	30
SH-2F Helicopter	7.99	10.51	32	45
P-3C Aircraft	42.83	55.83	30	78
Standard Missile (RIM 67B)	0.63	0.81	29	67
CH-53E Helicopter	18.30	23.46	28	57
Sparrow Missile, Air Force	0.12	0.15	25	39
Cost Impact of 18 Other Systems Showing Unit Price Increases				1,554
Cost Impact of 13 Other Systems Showing Unit Price Decreases				<u>-704</u>
Total Impact of 48 Systems				2,725

SOURCE: Compiled by CBO from data supplied by the Department of Defense.

Another measure of cost growth is the number of weapon systems reported in the DoD Selected Acquisition Report (SAR) that have reached the cost ceilings imposed by the Nunn Amendment to the fiscal year 1982 Defense Authorization bill. The Nunn Amendment requires special reports to the Congress when the total unit costs of a SAR weapons system exceed by more than 15 percent the unit cost reported in the March 1981 SAR. The following 13 systems reflect total system unit cost increases of more than 25 percent over the past 10 months: SSN-688 nuclear attack submarine, F-14, Sparrow missile (Navy and Air Force versions), Trident I missile, five-inch guided projectile (SAL), F-15, F-16, Defense Satellite Communications System, Roland missile system, Patriot missile, Pershing II missile, and AH-64 helicopter. Three systems reflect total system unit cost increases of greater than 15 percent but less than 25 percent: FFG-7 guided missile frigate, Phoenix missile, and Maverick missile.

POTENTIAL REDUCTIONS

Much of the initial debate about the Administration's budget request has focused on the issue of reducing proposed national defense outlays. The variety of defense programs affords a wide range of potential options for spending reductions. Typically, many options produce initial outlay savings equal to only a fraction of the program cost reduction in the long run. The following classification of the source of defense outlays helps to illustrate this problem.

- o 32 percent (\$72 billion) of national defense outlays for 1983 result from budget authority for 1982 (including proposed supplementals) and earlier years.
- o 62 percent (\$138 billion) of 1983 outlays relate to proposed 1983 budget authority to pay active duty and retired military and civilian defense personnel; to support defense activities at 1982 levels; and to continue ongoing modernization, development, and construction programs.
- o 6 percent (\$13 billion) of 1983 outlays result from 1983 budget authority for new activities, including new modernization programs and higher pay for defense personnel.

Excepting 1982 supplementals, to make any reduction in the \$72 billion of 1983 outlays from prior-year budget authority requires cancellation, delay, or termination of programs already approved and, in many cases, already under contract. The preponderance of programs in this category represent fully funded investments that expend appropriations over several

years. This characteristic, plus the fact that penalty costs are often incurred when the Administration has to cancel or modify existing contracts, means that 1983 outlay savings would be only a fraction of the ultimate outlay reductions from cutting such programs.

Similar problems affect the other two categories. For example, if none of the \$89.5 billion budget authority requested for weapons systems procurement were appropriated in 1983, outlays in that year would decline by less than \$11 billion, because so much of the budget authority will be spent after 1983, when most production occurs (see Function 050, Chapter IV). In general, to achieve a high proportion of 1983 outlay savings from cutting the Administration's 1983 request would usually require trimming personnel levels, pay increases (such as the proposed allowance for an October 1, 1982 federal pay raise), and relatively short lead time purchases such as fuel, ammunition, and maintenance-related items that affect readiness rather than modernization.

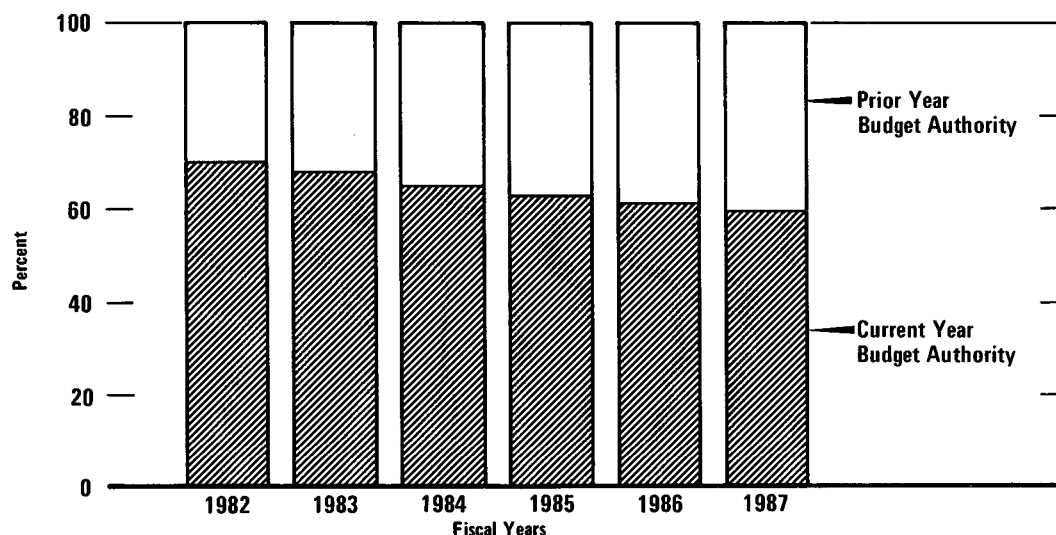
This condition will worsen in the future if the Administration program is enacted. The share of outlays from prior-years' funding in each year's projected outlays would rise steadily from 30 percent in 1982 to 41 percent in 1987 (see Figure 13). Thus, by approving programs with a larger modernization component, the Congress risks an outyear dilemma characterized by intensified competition for resources between modernization and readiness needs. If future defense budgets fall short of the real growth targets assumed here, the increasing share of the outlays required to finance previous years' programs will only further limit Congress's flexibility to establish or readjust priorities in defense programs.

To illustrate the outlay savings from average funding reductions, Table 39 provides calculations of savings from reduced real growth levels. The lower-growth options begin with a 1982 base that includes Congressional actions to date, plus supplementals for pay raises and military retired pay. Excluding all but the retired pay portion of the program supplemental saves \$0.8 billion in 1983 alone. The Administration's estimates include annual real growth for budget authority as high as 12.3 percent (1982 to 1983) and as low as 2.3 percent (1986 to 1987), for an annual average of 6.1 percent (1982 to 1987). Compared to the Administration proposal, providing a steady 7 percent in annual real growth in budget authority would achieve savings between 1983 and 1987, because cumulatively, the program would be reduced and some outlays that occur earlier, when more real growth is concentrated in 1983, would be pushed beyond 1987. Greater outlay savings would accrue from holding annual real growth to 3 percent--\$10 billion in 1983 and \$157 billion for the 1983-1987 period (see Table 39). To achieve more than \$10 billion savings in 1983 could mean little or no real growth in budget authority. For example, cutting the 1982 defense supplementals and

the entire increase in national defense budget authority above the 1982 enacted level would save \$8 billion and \$55 billion in 1982 and 1983 budget authority, respectively, and about \$21 billion in 1983 outlays. Denying military and civilian pay raises would increase 1983 outlay savings to \$24 billion.

Figure 13.

Percentage of Defense Outlays Resulting from Current and Prior Year Budget Authority



SOURCE: Congressional Budget Office.

The outlay savings shown in Table 39 assume proportional reductions in all spending categories other than pay. The first-year savings rate--37 cents for every dollar of budget authority--reflects reductions in operations and investment that save about 75 cents and 12 cents, respectively, for every budget authority dollar; reducing personnel and pay raises would increase 1983 savings.

TABLE 39. COMPARISON OF THE PRESIDENT'S DEFENSE BUDGET WITH ALTERNATIVE BUDGET PROJECTIONS (In billions of dollars)

	1982		1983		1984		1985	
	BA	O	BA	O	BA	O	BA	O
President's Budget with CBO Technical Reestimates <u>a/</u>	218.2	190.8	263.2	222.9	290.8	254.6	337.7	293.5
Options (President's request with CBO inflation assumptions) <u>b/</u>	218.2	190.8	264.7	223.1	296.1	257.2	349.0	300.3
7 % real growth <u>c/</u>	216.0	190.2	247.1	216.3	283.1	246.1	323.9	282.8
5 % real growth <u>c/</u>	216.0	190.2	242.4	214.6	272.6	240.7	306.0	272.0
3 % real growth <u>c/</u>	216.0	190.2	237.8	212.9	262.4	235.5	288.9	261.6

Differences from the President's Request								
President's Request with CBO Inflation Assumptions	---	---	1.5	0.2	5.3	2.6	11.3	6.8
7 % real growth	-2.2	-0.6	-16.1	-6.6	-7.7	-8.5	-13.8	-10.7
5 % real growth	-2.2	-0.6	-20.8	-8.3	-18.2	-13.9	-31.7	-21.5
3 % real growth	-2.2	-0.6	-25.4	-10.0	-28.4	-19.1	-48.8	-31.9

(Continued)

SOURCE: Congressional Budget Office

a/ These estimates are based on the President's request with adjustments for CBO technical reestimates to budget authority (BA) and outlays (O); they are based on the Administration's economic assumptions. Budget authority differs from Administration estimates mainly because CBO anticipates lower growth in the military retiree population; secondly, Congressional scorekeeping conventions require that CBO count the \$343 million shipbuilding reappropriation contained in the 1982 supplemental act as 1983 budget authority instead of 1982.

TABLE 39. (Continued)

	1986		1987		1983-1987 Total	
	BA	O	BA	O	BA	O
President's Budget with CBO Technical Reestimates <u>a/</u>	374.5	334.5	408.1	372.3	1,674.3	1,477.8
Options (President's request with CBO inflation assumptions) <u>b/</u>	392.4	346.7	433.5	390.7	1,735.7	1,518.0
7 % real growth <u>c/</u>	369.0	325.5	420.5	371.5	1,643.6	1,442.2
5 % real growth <u>c/</u>	342.2	307.6	382.7	344.8	1,545.9	1,379.7
3 % real growth <u>c/</u>	316.9	290.6	347.6	319.8	1,453.6	1,320.4

Differences from the President's Request						
President's Request with CBO Inflation Assumptions	17.9	12.2	25.4	18.4	61.4	40.2
7 % real growth	-5.5	-9.0	12.4	-0.8	-30.7	-35.6
5 % real growth	-32.3	-26.9	-25.4	-27.5	-128.4	-98.1
3 % real growth	-57.6	-43.9	-60.5	-52.5	-220.7	-157.4

b/ These estimates include additions to the President's program consistent with CBO's less optimistic inflation assumptions and more extensive application of specialized defense inflation estimates.

c/ These estimates assume that the reductions from the President's program will come mainly from the nonpay parts of the budget; assuming personnel or pay reductions would increase the outlay savings, but relatively little growth in the President's program occurs in these areas.

APPENDIX

APPENDIX. MAJOR CONTRIBUTORS TO THE PREPARATION OF
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